

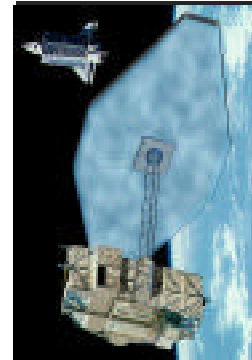


Flight Validation Experiments

NGST

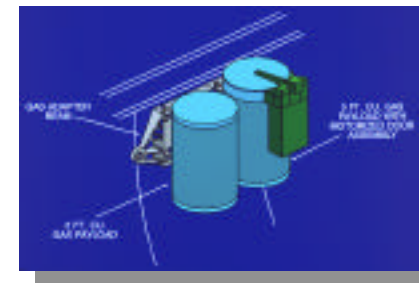
Pathfinder 1- Inflatable Shield In Space Experiment

- Demonstrate feasibility of using inflatable technology to passively cool NGST optical systems
- Collect thermal and dynamics data both during deployment and on orbit
- Shuttle based free-flyer in 2000



Pathfinder 2- Gravity Release Flight Experiments

- Demonstrate effects of zero gravity on lightweight mirror and deployment mechanisms
- Collect figure data on mirror and stability data on deployment mechanisms
- GAS Can and HitchHiker Experiments on Shuttle in late 1999-2000



Pathfinder 3- Deployable Optics Flight Experiment

- Demonstrate precision deployment
- Collect deployment, alignment, phasing, and optical control and dynamics data
- Shuttle based free-flyer in 2002



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